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TITLE: ELECTROLUMINESCENT ELEMENT AND MANUFACTURE THEREOF

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## INVENTOR-INFORMATION:

NAME

COUNTRY

FRIEND, RICHARD H

BURROUGHES, JEREMY H

BRADLEY, DONAL D

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

CAMBRIDGE DISPLAY TECHNOL LTD

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## ABSTRACT:

PROBLEM TO BE SOLVED: To manufacture a highly reliable electroluminescent element which has a wide surface area and whose electric power consumption is low by forming a poly phenylene vinylene PPV film with the thickness within a specified  $\mu\text{m}$  range on the surface of a first charge injection contact layer.

SOLUTION: Using a borosilicate glass 1 as a glass substrate, a first electric charge injection contact layer 2 is formed on the upper face of the substrate. This electric charge injection contact layer 2 is formed by thermal evaporation of aluminum through a shadow mask and the resultant substrate is exposed to air to form a thin film surface oxidized layer 3 and the electric charge injection contact layer is thus obtained. Next, a polymer solution is applied to the whole surface area of a joining substrate and while keeping the upper face in a horizontal state, the substrate is rotated at a specified rotation speed on an axis and the resultant substrate coated with a polymer precursor layer is thermally treated in a vacuum oven to convert the precursor into poly phenylene vinylene PPV. The obtained PPV film 4 has 100-300nm

thickness. After that, a second electric charge injection contact layer 5 is formed on the PPV film 4 by evaporation of gold or aluminum and an electric charge injection contact layer with 20-30nm thickness is thus obtained.

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L Number	Hits	Search Text	DB	Time stamp
1	22204	semiconductor and (tft or (thin adj film adj transistor))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/12 15:37
2	3573	(semiconductor and (tft or (thin adj film adj transistor))) and (cmos or complementary)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/12 15:38
3	1090	((semiconductor and (tft or (thin adj film adj transistor))) and (cmos or complementary)) and (ldd or (lightly adj doped adj drain))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/12 15:39
4	1082	((((semiconductor and (tft or (thin adj film adj transistor))) and (cmos or complementary)) and (ldd or (lightly adj doped adj drain))) and gate	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/12 15:39
5	1071	(((((semiconductor and (tft or (thin adj film adj transistor))) and (cmos or complementary)) and (ldd or (lightly adj doped adj drain))) and gate) and (electrode or wir\$3 or conduct\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/12 15:40
6	776	(((((semiconductor and (tft or (thin adj film adj transistor))) and (cmos or complementary)) and (ldd or (lightly adj doped adj drain))) and gate) and (electrode or wir\$3 or conduct\$3)) and (lcd or (liquid adj crystal adj display))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/12 15:41

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1	6478	(257/347, 351, 344, 412, 69, 72; 438/305).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/12 17:54